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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/748,977

12/30/2003

Angel Stoyanov

25339

8820

28624

7590

11/01/2006

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EXAMINER

WHITE, EVERETT NMN

ART UNIT

PAPER NUMBER

1623

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/748,977

**Applicant(s)**

STOYANOV ET AL.

**Examiner**

Everett White

**Art Unit**

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 21, 2006 has been entered.
2. The amendment filed August 21, 2006 has been received, entered and carefully considered. The amendment affects the instant application accordingly:
  - (A) New Claims 15-17 have been added;
  - (B) Claim 1 has been amended;
  - (C) Comments regarding Office Action have been provided drawn to:
    - (I) 103(a) rejections, which have been maintained for the reasons of record.
3. Claims 1-17 are pending in the case.
4. The text of those sections of Title 35, U. S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants amended the claimed invention by inserting into Claim 1 a step "wherein said curing occurs at a temperature from about 160°C to about 215°C".

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Applicants's amendment with respect to amended Claim 1 herein has been fully considered but is deemed as failing to conform to the written description requirement of the invention since the specification as originally filed does not provide support for "curing at a temperature ranging from about 160°C to about 215°C", which suggests that this range is specifically recited in the instant specification or that the specification specify or provides examples of a process that involves curing at 160°C. Although, the original specification discloses on page 9, lines 30 and 31, "fibers being cured at a temperature from about 120°C to about 215°C" and discloses on page 9, line 22, "the cured temperature of citric acid is about 170°C", it was not noted in the specification the disclosure wherein curing takes place at 160°C.

Consequently, there is nothing within the instant specification which would lead the artisan in the field to believe that Applicant was in possession of the invention as it is now claimed. See *Vas-Cath Inc. v. Mahurkar*, 19 USPQ 2d 1111, CAFC 1991, see also *In re Winkhaus*, 188 USPQ 129, CCPA 1975.

7. Applicant's arguments with respect to Claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

8. Claims 1-4, 6, 10, 12 and 13-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (US Patent No. 5,589,256) for the reasons disclosed on pages 3-5 of the Office Action mailed July 28, 2005.

9. Claims 1, 5-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (US Patent No. 5,589,256) as applied to Claims 1-4, 12 and 13 above, and further in view of Hansen et al (US Patent No. 5,789,326) for the reasons disclosed on pages 5 and 6 of the Office Action mailed July 28, 2005.

#### ***Response to Arguments***

10. Applicant's arguments filed August 21, 2006 have been fully considered but they are not persuasive. Applicants amended the claimed invention by inserting into Claim 1 a step "wherein said curing occurs at a temperature from about 160°C to about 215°C" and argues that this insertion further distinguish the claimed invention from the Hansen

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et al patent which teaches binding under conditions that favor formation of hydrogen bonds or coordinate covalent bonds. Applicants point to the Hansen et al patent disclosure (column 22, lines 63 to 65) wherein it is stated that the hydrogen bonds or coordinate covalent bonds are formed below 145°C, below 100°C and even at room temperature. This argument is not persuasive since the Hansen et al patent also discloses in column 23, lines 3-4, that curing of fibers at elevated temperatures (above 150°C) to prepare fibers that have high bulk from intrafiber covalent crosslinks.

The declaration of Angel Stoyanov pursuant to § 37 C.F.R. § 1.132 filed September 29, 2006 (originally filed Aug. 21, 2006) was carefully considered. Applicants disclosed that the declaration showed that, contrary to the statements of the Hansen et al patent, polyols do not crosslink with cellulose under the conditions of the instant invention. However, this argument is not persuasive since the Hansen et al patent clearly establish the preparation of crosslinked cellulose fibers wherein a polycarboxylic acid and a polyol are in combination at the time the process is carried out, just as demonstrated in Samples D, E, F and G of Table 1 of the Stoyanov declaration. See column 19, line 61 of the Hansen et al '256 patent wherein a polycarboxylic acid and a polyol may be used in combination. The fact that the Hansen et al patent covers hydrogen bonding (use of polyol alone) does not negate the teaching of the formation of intrafiber crosslinked cellulose fibers in the Hansen et al patent as well. Accordingly, the rejection of Claims 1-17 under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (US Patent No. 5,589,256) in view of Hansen et al (US Patent No. 5,789,326) is maintained for the reasons of record.

### ***Summary***

11. All the claims are rejected.

### ***Examiner's Telephone Number, Fax Number, and Other Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is 571-272-0660. The examiner can normally be reached on 9:30 to 6:00.

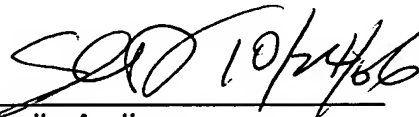
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



E. White



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